

September 14, 2005 Report

December 13, 2005

October 6, 2005 Report



THOMAS L. GARTHWAITE, M.D.
Director and Chief Medical Officer

FRED LEAF
Chief Operating Officer

COUNTY OF LOS ANGELES
DEPARTMENT OF HEALTH SERVICES
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Fifth District

September 14, 2005

TO: Each Supervisor

FROM: Thomas L. Garthwaite, M.D. *Thomas Garthwaite*
Director and Chief Medical Officer

Jonathan E. Fielding, M.D., M.P.H. *Jonathan E. Fielding*
Public Health Director and Health Officer

SUBJECT: **2005 WEST NILE VIRUS ACTION PLAN, MONTHLY FOLLOW-UP REPORT**

On March 8, 2005 we presented the Board our West Nile Virus (WNV) prevention and surveillance plan for 2005. This is the sixth monthly follow-up report describing WNV prevention and surveillance activities in 2005.

Since our last update in July, 12 human WNV cases have been identified within Los Angeles County (LAC) as of September 7, 2005. These cases include: one encephalitis, six meningitis, four WNV Fever, and one asymptomatic blood donor. Five cases are located in the San Fernando Valley, four are from eastern LAC, and one is from the San Gabriel Valley. Since the first confirmed WNV case on August 9th, the Acute Communicable Disease Control Program has posted biweekly updates on Tuesdays and Fridays on the Department of Health Services' website showing the location of WNV-infected birds and the number of confirmed WNV human cases, (<http://lapublichealth.org/acd/index.htm>). To date, there have been no reported human deaths due to WNV infection; two confirmed fatal horse infections were reported last week. Ten sentinel chickens from Antelope Valley have shown evidence of WNV-infection since late May. Seventy-eight WNV-infected dead birds have been identified in seven LAC census tracts, including those in Long Beach. One hundred and eighty-five WNV-infected mosquito pools have been detected, including those in Long Beach.

As of July 2005, all areas of Los Angeles County with the exception of Catalina Island previously without mosquito control services have reached agreements with local vector control agencies. Cities with mosquito abatement services include South Pasadena, Baldwin Park, La Cañada-Flintridge, and unincorporated areas within the Antelope Valley including Quartz Hills, West Palmdale and Rancho Vista.

Each Supervisor
September 14, 2005
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We will provide you with our next status report by October 16, 2005. In the meantime, if you have any questions or need additional information, let either of us know.

TLG:JEF:RC:sc

502:011 REF 2813 (A007LM2005 #6)

Attachments

c: Chief Administrative Officer
County Counsel
Executive Officer, Board of Supervisors

**WEST NILE VIRUS SURVEILLANCE AND PREVENTION
SUMMARY ACTION PLAN – Updated September 7, 2005**

| Agency | WNV Activity | Description | Completion Date | Implementation Date | Notes |
|----------|--------------------|--|-----------------------|---------------------|--|
| DHS ACDC | Human surveillance | Clinician letter -- mandatory WNV reporting and prevention message | Completed | April 18, 2005 | On July 1, 2004, the Health Officer made WNV infection reportable by clinicians and laboratories within one working day. |
| DHS ACDC | Human surveillance | Laboratory letter -- mandatory WNV reporting of results | Completed | April 18, 2005 | |
| DHS ACDC | Human surveillance | Clinical consultation on WNV to medical providers | Continuous year-round | Continuous | Schedule medical grand rounds for physicians |
| DHS ACDC | Human surveillance | Active surveillance at selected high risk areas within LAC | Continuous WNV Season | Continuous | Hospitals in eastern county were invited to join active surveillance project. Hospital will report all WNV tests performed in house or will receive free WNV testing by PHL. |
| DHS ACDC | Human surveillance | Update database and epidemiologic case history forms | Continuous | Date of first case | Ongoing data cleaning |
| DHS ACDC | Human surveillance | Facilitate HIPAA Training for Mosquito Abatement District Management staff | Completed | April 29, 2005 | ACDC facilitated LADHS HIPAA Training for key MAD management staff. |
| DHS ACDC | Human surveillance | Conduct Epidem. investigation | Continuous year-round | Date of first case | ACDC professional staff review and investigate all suspected WNV case reports, clinical laboratory reports, and blood bank positive donors. |

**WEST NILE VIRUS SURVEILLANCE AND PREVENTION
SUMMARY ACTION PLAN – Updated September 7, 2005**

| Agency | WNV Activity | Description | Completion Date | Implementation Date | Notes |
|----------|--------------------|---|--|---------------------|--|
| DHS ACDC | Human surveillance | Communication to local mosquito & vector control (MVCD) districts and CADHS | Continuous year-round | Date of first case | ACDC communicates pertinent location to local MVCD so it can assess and apply control measures if warranted. |
| DHS ACDC | Human surveillance | Communication to State DHS | Continuous year-round | Continuous | To synchronize statistics with state |
| DHS ACDC | Human surveillance | Summary reports of human cases | Continuous year-round | Date of first case | Analysis of confirmed cases on weekly or monthly basis. Update LAC DHS web page with accurate epidemiologic information. |
| DHS ACDC | Human surveillance | Analysis of human WNV surveillance data | Continuous year-round | Continuous | Generate weekly surveillance report - send by e-mail to appropriate agencies - post on website for public |
| DHS ACDC | Health Education | Coordinate prevention messages, press conferences and press releases with MVCDs and State | Continuous | Continuous | Collaborate to extent possible on standard public health messages, and special releases, informed by survey. |
| DHS ACDC | Health Education | Update WNV educational cards (palm cards) to reflect findings of LA Survey. | In process Available: English, Spanish | Sept 21, 2005 | In press: Korean, Chinese, Tagalog, Farsi, Vietnamese, Russian, Thai, Cambodian, Arabic |
| DHS ACDC | Health Education | Public Service Announcements in multiple radio stations; Clear Channel. | Completed | June 26-30, 2005 | A WNV prevention radio message ran in English and Radio stations through a contract with Clear Channel. |

**WEST NILE VIRUS SURVEILLANCE AND PREVENTION
SUMMARY ACTION PLAN – Updated September 7, 2005**

| Agency | WNV Activity | Description | Completion Date | Implementation Date | Notes |
|----------|--|---|-----------------------|---|--|
| DHS ACDC | Health Education | WNV Prevention messages on static cling-on sheets for posting. | Completed | June 1, 2005 | Materials available in English and Spanish available for posting on any surface. |
| DHS ACDC | Health Education | How to Mosquito Proof Your Home & Community | Completed | March 16, 2005 | Parks & Recreations will partner with distribution of health education materials |
| DHS ACDC | Health Education | Toll free public information line in multiple languages | Completed | May 11, 2005 Update additional languages | Review and update messages monthly or as needed. |
| DHS ACDC | Health Education | Web page provides up-to-date figures on WNV activity in LAC. Links to appropriate sites for more information; access to down-loadable materials | Ongoing | Ongoing | |
| DHS ACDC | WNV comprehensive status report | Provide information on cumulative human, bird, and mosquito indicators. | Continuous year-round | Continuous | Information to be e-mailed to appropriate agencies, posted on WNV web site |
| DHS CHS | Speakers Bureau (Area Health Officers) | New 2005 WNV Presentation | Completed | April 12, 2005 | 14 presentations were provided by the speaker's bureau in 2005 so far. |
| LAC VPH | Dead Bird Surveillance | Log calls from the public and MVCDs on dead birds. Arrange pick-up. | Continuous | Continuous | Arrange for test if bird has died recently (24-48 h) and belongs to corvid or raptor families. |
| LAC VPH | Dead Bird Surveillance | Perform VecTest (quick screening test) on dead birds | Continuous | Continuous | Confirmatory testing on positive birds is performed by LACPHL and California Viral and Rickettsial Disease Laboratory (VRDL) |

**WEST NILE VIRUS SURVEILLANCE AND PREVENTION
SUMMARY ACTION PLAN – Updated September 7, 2005**

| Agency | WNV Activity | Description | Completion Date | Implementation Date | Notes |
|---------------|--|--|------------------------|----------------------------|---|
| LAC EH | Collaboration | Work with board officials, county agencies and cities in developing long term, permanent mosquito control services to uncovered areas through annexation or contractual agreements | Continuous | Continuous | West of Quartz Hill toward Santa Clarita along highway 14 Corridor August 1st- Antelope Valley Mosquito and Vector control received \$19,000 from Governor's budget to fund uncovered areas noted above. |
| LAC EH | Collaboration | Respond to mosquito concerns in those cities and communities without routine mosquito surveillance and control services | Continuous | Continuous | Does not include abatement. |
| LAC EH | Public education and inter-departmental training | Routine literature distribution throughout all cities within the county and provide training to other departments | Continuous | Continuous | Materials from ACDC |
| LAC EH | Collaboration | Provide staff to DHS Speakers Bureau | Continuous | Continuous | |
| LAC EH | Coordination | Facilitate MVCD communications on mosquito and bird findings | Continuous | Continuous | Represent DHS in technical meetings on vector surveillance and control |
| Local MVCDs | Sentinel chickens Surveillance | Maintain sentinel chicken flocks at various geographic locations | Continuous | Continuous | Chickens are bled biweekly and tested at VRDL |

**WEST NILE VIRUS SURVEILLANCE AND PREVENTION
SUMMARY ACTION PLAN – Updated September 7, 2005**

| Agency | WNV Activity | Description | Completion Date | Implementation Date | Notes |
|-------------|------------------------|---|-----------------|---------------------|---|
| Local MVCDs | Mosquito Surveillance | Test mosquito pools for arboviruses including SLE, WEE, and WNV | Continuous | Continuous | The CA DHS reports biweekly mosquito surveillance results in <i>CA Arbovirus Surveillance Bulletin</i> |
| Local MVCDs | Mosquito Abatement | MVCDs receive reports from ACDC and VPH to identify areas of human and animal case activity | Continuous | Continuous | Mosquito larva abatement via larvacide, mosquito fish, and habitat elimination. Controlling adult mosquitoes is not a primary focus of any MVCD |
| Local MVCDs | Dead Bird Surveillance | Sites for positive birds are evaluated for possible mosquito abatement | Continuous | Continuous | |
| Local MVCDs | Public Education | Districts' mission includes promotion of personal responsibility to reduce mosquito breeding sites. | Continuous | Continuous | Each MVCD serves a defined catchment area. Outreach thru mailings, billboards, and mass media |

RC:sc

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WEST NILE VIRUS: Epidemiology Report

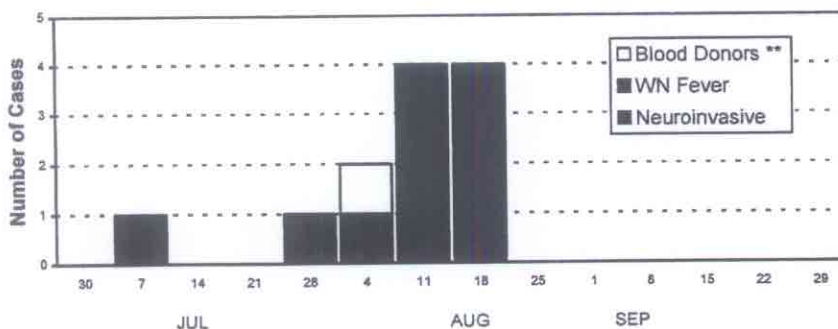
Cumulative Totals - September 2, 2005

West Nile Virus Case Characteristics - Los Angeles County, 2005¹

| | Total # | Information Unknown ² | Clinical Presentation | | | | | | Demographics | |
|----------------------------------|---------|----------------------------------|-----------------------|----------|----------------|---|---------------------------|--------|----------------|--------------------|
| | | | Blood Donor | WN Fever | Neuro-invasive | Neuroinvasive Diagnosis | Hospitalized ³ | Deaths | Gender (M / F) | Median Age (range) |
| TOTAL to date⁴ | 12 | 0 | 1 | 4 | 7 | 1 = Encephalitis 6 = Meningitis 0 = Acute Flaccid Paralysis | 8 | 0 | 7 / 5 | 49 yrs (22-89 yrs) |

- Excludes cases in Long Beach and Pasadena. Totals are provisional and subject to change.
- Cases reported positive but clinical and demographic information is pending.
- Hospitalized at time of diagnosis and may not reflect current clinical status.
- Cumulative case total as of Friday 09/2/05, 4pm.

West Nile Disease Cases by Week of Symptom Onset * Los Angeles County, 09/2/05 (N=12)



* Week of case confirmation does not necessarily reflect the week of illness onset. In 2004, LAC WNV cases were confirmed an average of 22 days after illness onset.

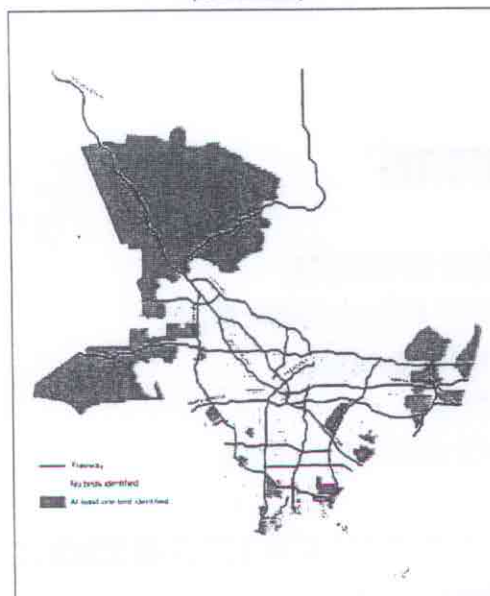
** Blood donors listed by date of donation.

West Nile Virus: Case Count by Service Planning Area (SPA) Los Angeles County, 09/2/2005

| LOCATION | TOTAL to date ¹ |
|--------------------------------|----------------------------|
| SPA 1: Antelope Valley | 0 |
| SPA 2: San Fernando | 5 |
| SPA 3: San Gabriel | 1 |
| SPA 4: Metro | 0 |
| SPA 5: West | 0 |
| SPA 6: South | 0 |
| SPA 7: East | 5 |
| SPA 8: South Bay | 1 |
| Residence Unknown ² | 0 |
| TOTAL³ | 12 |

- Totals are provisional and subject to change.
- Demographic information is excluded or pending.
- Cumulative case total as of Friday 09/2/05, 4pm.

Dead Birds Identified with West Nile Virus by ZIP Code Los Angeles County, 2005 (as of 9/1/2005)





THOMAS L. GARTHWAITE, M.D.
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DEPARTMENT OF HEALTH SERVICES

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December 13, 2005

TO: Each Supervisor

FROM: *for* Thomas L. Garthwaite, M.D.
Director and Chief Medical Officer

Jonathan E. Fielding, M.D., M.P.H.
Director of Public Health and Health Officer

SUBJECT: **2005 LOS ANGELES COUNTY WEST NILE VIRUS SURVEILLANCE SUMMARY**

During the year, we provided monthly updates on West Nile virus (WNV) activity within Los Angeles County (LAC). The purpose of this memo is to provide an overview of the 2005 WNV season in the context of the past three years.

Since the introduction of the WNV in the continental United States (US) in the summer of 1999, it has become established in nearly all the contiguous states, causing over 10,000 cases and 262 deaths in 2003 alone. WNV arrived in California (CA) in 2003 with three laboratory-confirmed symptomatic human cases, one of which was apparently acquired locally in LAC. In 2004, CA reported 779 human WNV infections, the greatest number of any state in the US; LAC documented 309 cases, more than any other CA local health department. In 2005, CA reported 910 WNV infections; one third of 2,733 reported cases nationally. In contrast to 2004 when WNV activity was focused in Southern CA, in 2005 WNV was widespread throughout northern, central, and southern CA, with Sacramento County reporting the greatest number cases of any jurisdiction, 175 cases. In contrast to 2005, LAC documented only 43 WNV human infections in 6 of 8 SPA's (preliminary data as of November 29, 2005): San Fernando (18), San Gabriel (4), West (1), South (2), East (12), and South Bay (6) (Table 1).

Of the 43 human WNV infections, 37 (86%) individuals were symptomatic; 28 (65%) experienced neuroinvasive disease and 9 (21%) experienced West Nile fever. Blood bank screening detected WNV infection in six asymptomatic donors; all asymptomatic blood donors were re-screened by local health departments and remained asymptomatic. In contrast to 2004 when 12 fatalities were associated with WNV, no WNV-related fatalities were reported this year.

As of November 29, 2005, non-human WNV activity has been detected in all eight LAC Service Planning Areas (SPAs). This includes: 157 WNV-infected dead birds in eight SPAs, 114 WNV-positive mosquito pools in six SPAs, 69 WNV-positive sentinel chickens in four SPAs including the Antelope Valley, and 10 WNV-positive horses in four SPAs. Of the 10 horses, six horses either died or were euthanized as a result of WNV infection.

WEST NILE VIRUS ACTIVITY IN LAC (Table 1)

| WNV INFECTIONS | 2003 | 2004 | 2005 |
|-----------------------|-------------|-------------|-------------|
| Humans | 1 | 309 | 43 |
| Horses | 0 | 16 | 10 |
| Birds (dead) | *65 | *840 | *163 |
| Sentinel chickens | 0 | *166 | *74 |
| Mosquito pools | *6 | *408 | *217 |

*Includes the City of Long Beach

WHY THE DRAMATIC DECREASE IN WNV ACTIVITY WITHIN LAC IN 2005?

In the six years since WNV arrived and spread across most of the US, WNV activity has shown dramatic fluctuations in both human cases and non-human WNV surveillance. This is because maintenance of WNV infection requires a dynamic balance among environmental conditions (local temperature, rainfall, and humidity), bird reservoirs, mosquito populations, human hosts, and other factors such as the intensity of local mosquito abatement services. Mosquito abatement specialists and other WNV experts have speculated that there are various reasons for the dramatic decrease in WNV activity seen within LAC in 2005 compared to that of 2004. One reason could be decreases in local mosquito populations. From March through May 2005, the season was much cooler compared to last year. As a result, mosquito increases normally seen in late spring were delayed. Record rainfall in 2005 created larger-than-normal bodies of water and diluted nutrients, which could have been a leading factor to slow mosquito development. Another possible reason for the 2005 WNV decrease could be the large mortality among local bird populations in 2004 such as crows, leading to decreased avian reservoirs of infection. Ultimately, no one truly understands the reasons for these dynamics. Regardless, intense mosquito abatement by local districts should be acknowledged for playing an important role in controlling WNV infections for the 2005 season.

WNV surveillance is conducted throughout the entire calendar year. This includes surveillance for WNV-infected dead-bird reporting testing, mosquito pools, sentinel chickens, human disease surveillance, and blood donor infection (see attachment).

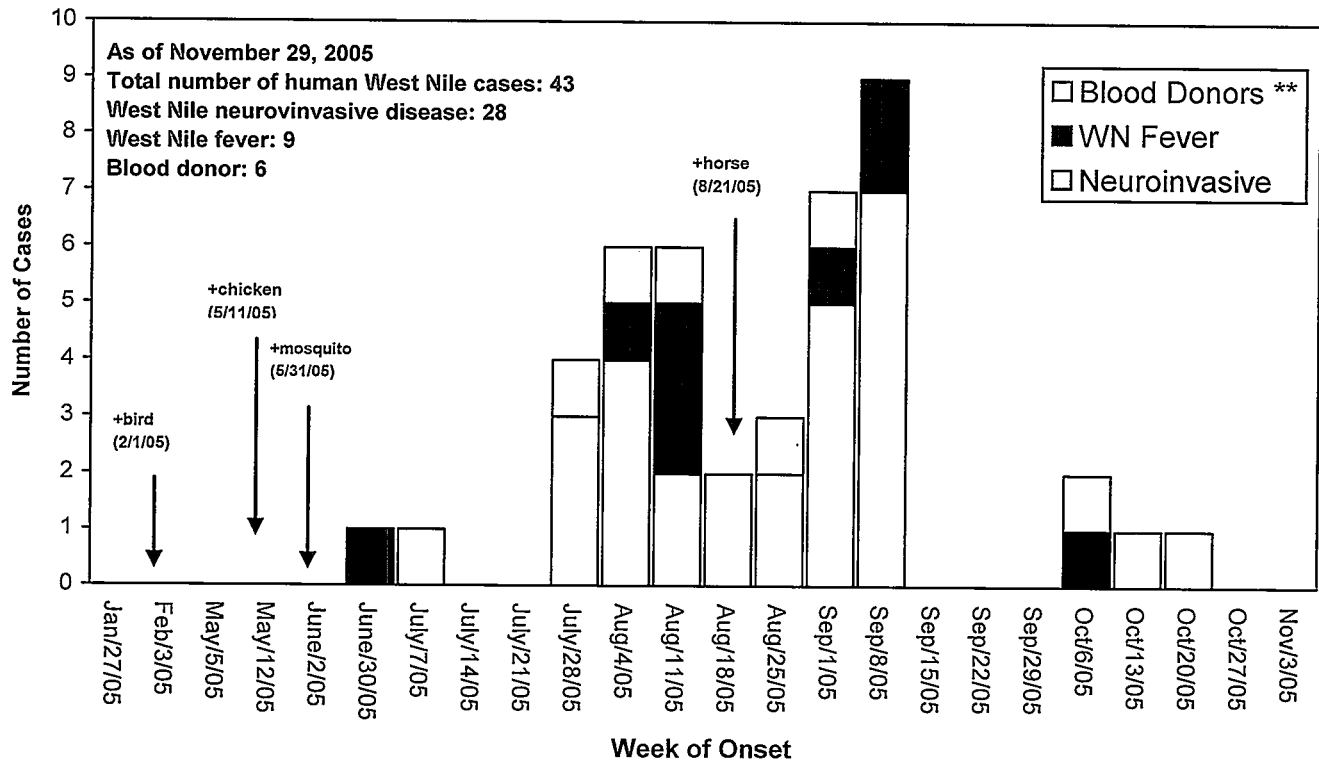
If you have any questions or need additional information, please let either of us know.

TLG:JEF:DD:sc
Assignment: REF #3239 (A062LM2005)

Attachment

c: Chief Administrative Officer
County Counsel
Executive Officer, Board of Supervisors

Human West Nile Virus Cases LAC, 2005





THOMAS L. GARTHWAITE, M.D.
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TO: Each Supervisor

FROM: Thomas L. Garthwaite, M.D.
Director and Chief Medical Officer

Jonathan E. Fielding, M.D., M.P.H.
Public Health Director and Health Officer

SUBJECT: 2005 WEST NILE VIRUS ACTION PLAN, MONTHLY FOLLOW-UP REPORT

On March 8, 2005, we presented the Board our West Nile Virus (WNV) prevention and surveillance plan for 2005. This is the seventh monthly follow-up report describing WNV prevention and surveillance activities in 2005.

Since our last update in September, 20 new cases of WNV infection were confirmed; a total of 32 human WNV cases have been identified as of October 3, 2005. These cases include: eight encephalitis, 12 meningitis, eight WNV Fever, and four asymptomatic blood donors. Eleven cases are located in the San Fernando Valley, 10 are from eastern County, four are from the South Bay, four are from the San Gabriel Valley, two are from South Los Angeles, and one is from West Los Angeles. Since the first confirmed WNV case on August 9, the Acute Communicable Disease Control Program has posted biweekly updates on Tuesdays and Fridays on the Department of Health Services' website showing the location of WNV-infected birds and the number of confirmed WNV human cases (<http://lapublichealth.org/acd/index.htm>). To date, there have been no reported human deaths due to WNV infection. Ten confirmed horse infections have been reported. One hundred thirty-three WNV-infected dead birds and 65 sentinel chickens have shown evidence of WNV infection, including those in Long Beach. Two hundred eleven WNV-infected mosquito pools have been detected, including those in Long Beach.

We will provide you with a final report for the 2005 season by November 16, 2005. In the meantime, if you have any questions or need additional information, please let either of us know.

TLG:JEF:RC:sc
502:011 REF 2813 (A007LM2005 #7)

Attachment

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WEST NILE VIRUS: Epidemiology Report

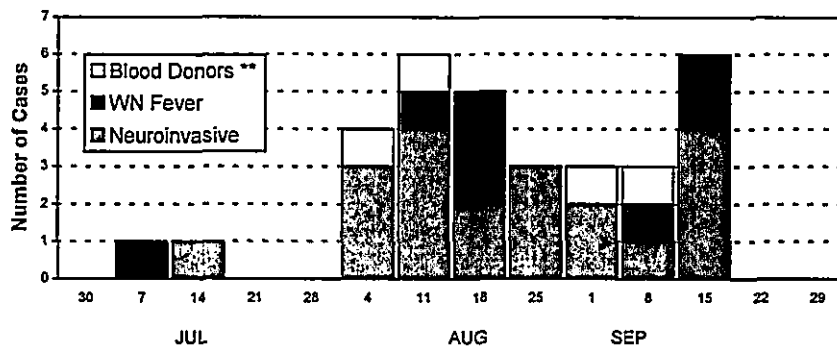
Cumulative Totals – October 3, 2005

West Nile Virus Case Characteristics - Los Angeles County, 2005¹

| | Total # | Information Unknown ² | Clinical Presentation | | | | | | Demographics | |
|----------------------------------|---------|----------------------------------|-----------------------|----------|----------------|--|---------------------------|--------|----------------|--------------------|
| | | | Blood Donor | WN Fever | Neuro-invasive | Neuroinvasive Diagnosis | Hospitalized ³ | Deaths | Gender (M / F) | Median Age (range) |
| TOTAL to date⁴ | 32 | 0 | 4 | 8 | 20 | 8 = Encephalitis 12 = Meningitis 0 = Acute Flaccid Paralysis | 22 | 0 | 19 / 13 | 50 yrs (4-89 yrs) |

1. Excludes cases in Long Beach and Pasadena. Totals are provisional and subject to change.
2. Cases reported positive but clinical and demographic information is pending.
3. Hospitalized at time of diagnosis and may not reflect current clinical status.
4. Cumulative case total as of Monday 10/3/05, 4pm.

West Nile Disease Cases by Week of Symptom Onset*
Los Angeles County, 10/3/05
(N=32)



* Week of case confirmation does not necessarily reflect the week of illness onset. In 2004, LAC WNV cases were confirmed an average of 22 days after illness onset.
** Blood donors listed by date of donation.

West Nile Virus: Case Count by Service Planning Area (SPA) Los Angeles County, 10/3/2005

| LOCATION | TOTAL to date ¹ |
|--------------------------------|----------------------------|
| SPA 1: Antelope Valley | 0 |
| SPA 2: San Fernando | 11 |
| SPA 3: San Gabriel | 4 |
| SPA 4: Metro | 0 |
| SPA 5: West | 1 |
| SPA 6: South | 2 |
| SPA 7: East | 10 |
| SPA 8: South Bay | 4 |
| Residence Unknown ² | 0 |
| TOTAL³ | 32 |

1. Totals are provisional and subject to change.
2. Demographic information is excluded or pending.
3. Cumulative case total as of Monday 10/3/05, 4pm.

Dead Birds Identified with West Nile Virus by ZIP Code Los Angeles County, 2005 (as of 10/3/2005)

